§ 26. New or Little-known Ferns of the United States.--No. 3.

7. **Cheilanthes myriophylla,** Desv.—A well-known Mexican and South American Fern, but very rare in the United States. It much resembles *Ch. Fendleri*, Hook, but is rather larger, and has the under surface matted with a fine tomentum under the scales, while C. Fendleri has the scales only, and these mostly confined to the midribs and divisions of the rachis. It was collected several years ago in "South California" by Dr. Arthur Schott, in Arizona in 1866 by Mr. Clarence King, and in the same territory in 1870 by Dr. E. Palmer.

8. **Cheilanthes Clevelandii,** sp. nov.—Fronds (4–10 inches high) ovate-oblong, tripinnate with closely set minute roundish segments, smooth above, beneath densely covered with minute imbricating, cinnamon-brown, ovate, ciliated and laciniated scales, growing on the segments as well as on the midribs; segments flattish, the margin narrowly recurved and unchanged in texture.—Growing on a mountain about forty miles from San Diego, California, at an elevation of about 2,500 feet, Mr. Daniel Cleveland. While closely related to *C. myriophylla* and *C. Fendleri* this Fern is easily distinguished by the deep fulvous color of the scales, which are elegantly ciliated, the cilia recurved and visible from the upper surface of the frond. The rootstock is apparently rather short, and scaly as in the related species. The stipes from two to six inches long, dark brown, and, like the rachis, beset with narrow rigid scales.

9. **Cheilanthes Cooperæ,** sp. nov.—Fronds (4—8 inches high) ovate-lanceolate, hairy, like the brownish fragile stipes, with entangled or straightish, nearly white, articulated, *mostly gland-tipped* hairs, twice pinnate; the rather distant pinnæ oblong-ovate, pinnules roundish-ovate, crenate and incised, the ends of the lobules reflexed and forming herbaceous involucres, segments at length flat. —California; near Santa Barbara, Mrs. Ellwood Cooper; Sierra Valley, Mr. J. G. Lemmon.—This has much the appearance of the Eastern *C. vestita*, which ranges from New York to Kansas, but has never been found west of the Rocky Mountains. In C. vestita the hairs are always very acute, while in C. Cooperæ they are usually tipped with glandular and, I think, viscid enlargement. I take great pleasure in giving for the first time to an American Fern the name of a lady botanist.

10. **Cheilanthes microphylla,** Swartz.—This species was collected by the Botanists of the Mexican Boundary Survey, many years ago, together with *C. Alabamensis*, Kze. The latter has just been sent again from Austin, Texas, but the former has not been received a second time from anywhere within our limits.

D. C. EATON.

NEW HAVEN, *May* 15th, 1875.

§ 27. Description of two new species of Musci, by THOMAS P. JAMES.

1. **Atrichum Lescurii,** *n. sp.*—Plantæ gregariæ vel laxe cæspitosæ, fusco-nigricantes. Caulis simplex ultra pollicaris, erecto-flex-

uosus, gracilis inferne nudus, superne laxe foliosus. Folia caulina perichætaliaque siccitate crispato-inflexa, humiditate erecto patentia, lineari-lanceolata acuminata, concava margine argute serrata, basi dilatata subamplectente ciliata, cellulis subquadratis superne rotundatis obscuris areolata; costa percurrente lamellis serratis 4–8 dorso convexo. Capsula in pedicello brevi vix semipollicari crassiusculo recto ovato-cylindrica brevis vel ore dilatato turbinata.

Patria Alaska, A. Kellogg legit.

A very interesting slender dark colored species, quite distinct, with narrow crisped leaves, and 6 to 8 long flexuose cilia on each margin near the sheathing base, the lamellæ of the costa serrate. The capsule is very short ovate with a wide mouth; the peristome and operculum wanting, a loose calyptra of the genus was found. The plant was intermingled with a variety of Pogonatum contortum.

2. **Dicranodontium nitidum,** *n. sp.*—Laxe cæspitosum, cæspites molles, inferne pallide rufescentes, superne pallide viridi sericei. Plantæ graciles, simplices vel superne parce divisæ sola basi radicantes. Folia inferiora minora e basi lanceolata brevi subulata superiora e basi ovali-oblonga multo longiora in subulam longam crassam caniculatam denticulatam, dorso rugosam exeuntia, costa dilatata mediam partem basis occupante subulam que totam efformante. Anguli basilares concavi eorundem reti hexagono-quadrati, pellucidi, superiores angusti equilaterales longiores.

Hab. on rocks at Dixville Notch, New Hampshire, *James.*

This new species well characterized by its reticulation, its strong broad nerve which fills the whole point from its base, and by the long rugose or papillose point denticulate on the back and dentate on the border. The leaves are generally somewhat falcate curved or secund at the base of the stems, erect open or even falcate and undulate at the top of the plants when moistened. The point of the leaves is not quite as long as that of Dicranodontium longirostre, but the nerve is thicker, broader, occupying the whole point and nearly one-half of the base of the leaves. The whole plant presents a beautiful shining lustre.

§ 28. **Publications Received.**—*A Sketch of the Natural History of the Diatomaceæ*, by A. Mead Edwards, M. D., Microscopist to the Geological Survey of New Hampshire, pp. 416–505. Concord, N. H., 1874. This is a separate issue of a chapter of the State survey. It is a disputed point whether the Diatomaceæ belong to the vegetable kingdom; our author inclines with Haeckel to separate them under the name of Protista. They are, however, usually considered as vegetables, and as such come under the botanist's observation. This sketch is intended as a popular introduction to the study while scientifically correct. It consists of eight parts; relating to the general character, movements, modes of growth and reproduction, modes of occurrence, geological relations, and directions for collecting and studying. There are three Albert-type plates from the author's own drawings. The remarks on the occurrence of Diatoms in guano and the sedimentary deposits of the Western basins and canons are of general interest. The author has